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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q62554

Jeong-hoon PARK, et al.

Appln. No.: 09/783,126

Group Art Unit: 2133

Confirmation No.: 1502

Examiner: Esaw T. ABRAHAM

Filed: February 15, 2001

For: APPARATUS FOR TRANSMITTING AND RECEIVING WIRELESS DATA AND  
METHOD THEREOF

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of \$500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE  
23373  
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Date: March 13, 2006



## PATENT APPLICATION

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### APPEAL BRIEF UNDER 37 C.F.R. § 41.37

#### MAIL STOP APPEAL BRIEF - PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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**I. REAL PARTY IN INTEREST**

Based on the information supplied by the Appellants, and the best of Appellants' legal representative's knowledge, the real party in the interest is the assignee, SAMSUNG ELECTRONICS CO., LTD. The Assignment was recorded on May 21, 2001 at Reel 001824 at Frame 0659.

**II. RELATED APPEALS AND INTERFERENCES**

Appellants, as well as Appellants' assigns and legal representatives, are unaware of any appeals or interferences which will be directly affected by, or which directly affect or have a bearing on, the Board's decision in the pending case.

**III. STATUS OF CLAIMS**

Claims 1-39 are all the claims pending in the application, have been finally rejected, and are the subject of this appeal. The pending claims are set forth in the Appendix.

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**IV. STATUS OF AMENDMENTS**

No amendments have been filed subsequent to the final Office Action dated July 13, 2005.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

The present invention provides, in an exemplary embodiment, a method for transmitting and receiving wireless data comprising the steps of: establishing a catalog of information related to an application data service (Fig. 3, operation 310); adding header information by referring to the established catalog, and error detecting codes to application data related to the application data service (Fig. 3, operation 330); and deciphering a header when data errors are detected by the error detecting codes added to the application data (Fig. 4, operation 450), and transmitting the application data to an upper ranking layer according to a quality of service if the deciphered value of the header belongs to the determined catalog (Fig. 4, operation 460). *See independent claim 1, for example.*

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**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-39 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sen et al. (US Patent No. 6,765,909) in view of Gage et al. (US Patent No. 6,515,972).

**VII. ARGUMENT**

**A. Claims 1-39 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Sen in view of Gage.**

With respect to independent claim 1, Appellants submit that neither Sen nor Gage, either alone or in combination, teaches or suggests at least, “adding header information by referring to the established catalog,” as recited in independent claim 1. Specifically, the Examiner alleges that Sen teaches the above-quoted limitation, however, Sen (*see. Col. 3, lines 24-31*) only discusses detecting and identifying a connection by reading a connection number field of a compressed TCP/IP header in a packet, and applying appropriate quality of service levels as determined from a user database and a list of available quality of service levels. Nowhere, however, does Sen teach or suggest adding the header information by referring to an established catalogue.

In response to this argument, the Examiner alleges (*See Office Action dated July 13, 2005*):

The applicant argues that the prior arts of record Sen et al. and Gage do not teach or suggest adding header information by referring to the established catalog. However, this argument is moot. This is so because the cited prior art (Sen et al.) clearly teach a classification application utilizing a table (catalog) of connection numbers and association TCP/IP applications utilized for determining a wireless packet communication, quality of service level by decoding connection number field of the packet header (see abstract). Therefore, the application of the prior art in relation to the claimed invention is appropriate.

In response, Appellants submit that the Examiner essentially repeats the same arguments set forth previously. Further, Appellants submit that the table of connection numbers mentioned

in the Abstract of Sen is only used for determining a wireless packet communication of an incoming packet, however said table of connection numbers, which allegedly corresponds to the claimed “established catalog,” does NOT relate to adding header information by referring to the established catalog. Nowhere does Sen even mention this particular feature of adding information by referring to an established catalog.

Therefore, at least based on the foregoing, Appellants submit that independent claim 1 is patentably distinguishable over the applied references, either alone or in combination. Appellants submit that independent claims 4, 5 and 39 are patentable at least for reasons similar to those set forth above with respect to claim 1.

Appellants submits that dependent claims 2, 3, and 6-38 are patentable at least by virtue of their respective dependencies from independent claims 1, 4 and 5.

Further, with respect to claim 2, Appellants submit that Sen does not teach or suggest that header information of each layer is added to the application data. In response, the Examiner alleges (*see Office Action dated July 13, 2005*):

As for the argument that no header information of each layer is added to the application data, the examiner disagrees and asserts that header information of each layer must be added to the application data and inherently requires since a header information is the part of a message that describes the originator, the address and other recipients, message priority levels or precedes the data or control signals and describes about the transmission unit, such as its length and whether there are other files or transmission units logically or physically associated with this one. In light of the responses above, the examiner believes that the prior art were properly applied.

In response, Appellants submit that even if, *arguendo*, the header information is the part of a message that describes the originator, the address and other recipients, etc., it does not

necessarily follow that header information of each layer would be added. The type of information included in a header is dependent on what a data packet is being used for, and neither of the applied references (specifically Sen) disclose or suggest that header information of each layer is added to the application data. The Examiner utilizes impermissible hindsight reasoning in coming to the conclusion that the feature of claim 2 is inherent.

Further, with respect to dependent claims 6-9, the Examiner alleges that the features of these claims are satisfied based on col. 3, lines 33-67 of Gage, and offers supporting arguments at the top of page 7 of the Office Action dated January 27, 2005. In response, however, Appellants submit that nowhere does the Examiner mention nor does Gage teach or suggest at least adding error detecting codes in a physical layer. The Examiner mentions and Gage only generally describes a radial link protocol providing error detection, but does not discuss the particular features of claims 6-9.

In response, the Examiner alleges (*see Office Action dated July 13, 2005*):

As for the argument that Gage et al do not teach that adding error detecting codes in a physical layer. However, Gage et al. teach that n RLP type based on the generic service(s) available to mobile station, as for example voice services, packet data services, and/or circuit switched data services and the voice service may use an RLP providing error detection and forward error correction, the packet data service may use an RLP providing error detection and retransmissions, while the circuit switched data service may use an RLP providing transparent bit service (see col. 3, lines 33-67).

In response to this argument, Appellants submit that the Examiner continues to quote and cite alleged teachings in Gage that relate to the RLP layer, however, claims 6-9 describe adding error detecting codes in a physical layer. The RLP layer and physical layer are different layers (see Figure 1 of present application that shows different protocol layers), therefore, even if,

*arguendo*, the above quoted allegations of the Examiner are accurate, the applied references (specifically Gage) do not disclose or suggest that error detecting codes are added in a physical layer.

Yet further, with respect to dependent claims 6-9, the Examiner alleges (*Office Action dated July 13, 2005*):

Further, the on page 2, lines 5-8 of the applicant's related art, the applicant teaches that the cdma telecommunication system checks for errors (error detection) or CRC in the physical layer (see page 2, lines 5-8). Therefore, the applicant's argument although acknowledged, has not been found to be convincing.

First, Appellants note that the Examiner is relying on a portion of the present specification ("Description of the Related Art") to support his argument, however the Examiner did not officially indicate this portion of the specification is being applied as prior art. In the Response dated October 13, 2005, Appellants requested that the Examiner issue a new NON-final Office Action if the Examiner continues to rely on the above-cited portion of the specification, however the Examiner never issued a new NON-final Office Action. Therefore, Appellants respectfully request the Board of Patent Appeals and Interferences to NOT use the above-quoted portion of the specification to support the Examiner's argument, as it was not properly applied as prior art.<sup>1</sup>

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<sup>1</sup> Even if the Board of Patent Appeals and Interferences applies the admitted related art to support the Examiner's rejections, Appellants submit that claims 6-9 describe adding error detection codes (at a transmitting device), while the cited portion in the related art only discusses checking for errors at a receiving device. Nowhere does the admitted related art discuss adding error detection codes in a physical layer.

With respect to dependent claims 10-15, the Examiner alleges that the features of these claims are satisfied based on the arguments set forth in the second full paragraph on page 7 of the Office Action dated January 27, 2005. In response, Appellants submit that nowhere does Sen, Gage, or the combination thereof, teach or suggest at least, “wherein the catalog is established during a previous transmission/reception of application data,” as recited in claims 10-15. That is, Sen, for example, only describes the different mechanisms that are used to control the radial resources to achieve corresponding quality of service requirements. However, nowhere is it even mentioned that a catalog of information related to an application data service is established during a previous transmission reception of application data.

In response, the Examiner alleges (*Office Action dated July 13, 2005*):

The applicant further argues that the prior arts (Sen or Gage) do not teach the catalog is established during a previous transmission/reception of application data. However, Sen et al. in claim 1 clearly teaches that providing a table (catalog) comprising a first set of data and second set of data, said first set of data containing a plurality of identified connection numbers, and said second set of data containing a corresponding quality of service plane for each identified connection number in the table, wherein each of said plurality of identified connection numbers is an identifier of a particular data packet connection; and mapping within said table said connection number for said data packet to a corresponding quality of service plane. The argument is again acknowledged but is not convincing.

In response to this argument, Appellants submit that there is clearly no mention of establishing a catalog during a previous transmission/reception of application data. Claim 1 of Sen only relates to a method for classifying data in a data packet, and the operations thereof which include only providing a table having a first set of data containing a plurality of identified connection numbers that correspond to a particular quality of service, for the purpose of mapping

a connection number for a data packet to a corresponding quality of service. However, nowhere does claim 1 relate to establishing, or effectuating, a catalog during a previous transmission/reception of application data. Therefore, at least based on the foregoing, Appellants maintain that dependent claims 10-15 are patentably distinguishable over the applied references, either alone or in combination.

Further, with respect to dependent claims 33-35, the Examiner does not even address the specific features of these claims in the previous Office Actions, therefore Appellants maintain that claims 33-35 are patentably distinguishable over the applied references.

**Conclusion**

Appellants submit that, at least based on the foregoing, the present invention, as recited in each of claims 1-39, is patentably distinguishable over the applied references, either alone or in combination.

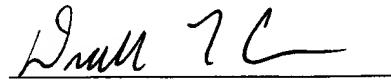
Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

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**ATTORNEY DOCKET NO. Q62554**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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**CLAIMS APPENDIX**

**CLAIMS 1-39 ON APPEAL:**

1. A method for transmitting and receiving wireless data comprising the steps of:  
establishing a catalog of information related to an application data service;  
adding header information by referring to the established catalog, and error detecting codes to application data related to the application data service; and  
deciphering a header when data errors are detected by the error detecting codes added to the application data, and transmitting the application data to an upper ranking layer according to a quality of service if the deciphered value of the header belongs to the determined catalog.
2. The method of claim 1, wherein the header information of each layer is added to the application data.
3. The method of claim 1, wherein deciphering the header occurs while receiving the data.
4. A method for transmitting wireless data comprising the steps of:  
establishing a catalog of information related to an application data service;  
establishing a payload, including application data related to the application data service, and adding header information related to the application data by referring to the established catalog; and  
adding error detecting codes to the payload, and performing channel-coding.

5. A method for receiving wireless data in a wireless data system including a catalog of information related to an application data service, comprising the steps of:

determining data errors in each layer using error detecting codes added to received data after channel-decoding the received data;

deciphering header information in each layer when data errors are detected;

transmitting data to an upper ranking layer according to the quality of service if the header information deciphered in each layer belongs to the catalog; and

decoding the transmitted data.

6. The method of claim 1, wherein the error detecting codes are added in a physical layer.

7. The method of claim 2, wherein the error detecting codes are added in a physical layer.

8. The method of claim 3, wherein the error detecting codes are added in a physical layer.

9. The method of claim 4, wherein the error detecting codes are added in a physical layer.

10. The method of claim 1, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes data information related to radio link protocol (RLP) and multiplex (MUX) sub layers.

11. The method of claim 2, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes data information related to radio link protocol (RLP) and multiplex (MUX) sub layers.

12. The method of claim 3, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes data information related to radio link protocol (RLP) and multiplex (MUX) sub layers.

13. The method of claim 4, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes data information related to radio link protocol (RLP) and multiplex (MUX) sub layers.

14. The method of claim 5, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes data information related to radio link protocol (RLP) and multiplex (MUX) sub layers.

15. The method of claim 1, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes information related to the quality of service.

16. The method of claim 2, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes information related to the quality of service.

17. The method of claim 3, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes information related to the quality of service.

18. The method of claim 4, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes information related to the quality of service.

19. The method of claim 5, wherein the catalog is established during a previous transmission/reception of application data, said catalog includes information related to the quality of service.

20. The method of claim 15, wherein the information related to the quality of service is a delay time value of the transmitted data or an error generation probability value of the transmitted data.

21. The method of claim 16, wherein the information related to the quality of service is a delay time value of the transmitted data or an error generation probability value of the transmitted data.

22. The method of claim 17, wherein the information related to the quality of service is a delay time value of the transmitted data or an error generation probability value of the transmitted data.

23. The method of claim 18, wherein the information related to the quality of service is a delay time value of the transmitted data or an error generation probability value of the transmitted data.
24. The method of claim 19, wherein the information related to the quality of service is a delay time value of the transmitted data or an error generation probability value of the transmitted data.
25. The method of claim 1, further comprising a step of signaling null data to the upper ranking layer, if the header information deciphered in each layer does not exist in the catalog.
26. The method of claim 2, further comprising a step of signaling null data to the upper ranking layer, if the header information deciphered in each layer does not exist in the catalog.
27. The method of claim 3, further comprising a step of signaling null data to the upper ranking layer, if the header information deciphered in each layer does not exist in the catalog.
28. The method of claim 5, further comprising a step of signaling null data to the upper ranking layer, if the header information deciphered in each layer does not exist in the catalog.
29. The method of claim 1, further comprising a step of applying a predetermined standard of judgment according to a quality of service or a decoder of the application layer, when the data is transmitted to the upper ranking layer.

30. The method of claim 2, further comprising a step of applying a predetermined standard of judgment according to a quality of service or a decoder of the application layer, when the data is transmitted to the upper ranking layer.

31. The method of claim 3, further comprising a step of applying a predetermined standard of judgment according to a quality of service or a decoder of the application layer, when the data is transmitted to the upper ranking layer.

32. The method of claim 5, further comprising a step of applying a predetermined standard of judgment according to a quality of service or a decoder of the application layer, when the data is transmitted to the upper ranking layer.

33. The method of claim 29, wherein the predetermined standard of judgment is decided by referring to cyclic redundancy code (CRC) information calculated in a physical layer, header fields of each layer, and an initially established data service catalog.

34. The method of claim 30, wherein the predetermined standard of judgment is decided by referring to cyclic redundancy code (CRC) information calculated in a physical layer, header fields of each layer, and an initially established data service catalog.

35. The method of claim 31, wherein the predetermined standard of judgment is decided by referring to cyclic redundancy code (CRC) information calculated in a physical layer, header fields of each layer, and an initially established data service catalog.

36. The method of claim 29, wherein the predetermined standard of judgment is decided based on whether error correction needs to be performed, as determined by the header fields.
37. The method of claim 30, wherein the predetermined standard of judgment is decided based on whether error correction needs to be performed, as determined by the header fields.
38. The method of claim 31, wherein the predetermined standard of judgment is decided based on whether error correction needs to be performed, as determined by the header fields.
39. An apparatus for transmitting and/or receiving wireless data comprising:  
transmitting means for establishing a catalog of information related to an application data service, adding header information of each protocol layer by referring to a catalog , adding error detecting codes to the application data, and transmitting the application data, including the header information and the error detecting codes; and  
receiving means for deciphering a header if data errors are detected by the error detecting codes of the application data received from the transmitting means, and decoding the data according to a quality of service if the deciphered value belongs to the established catalog.

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**EVIDENCE APPENDIX:**

NONE

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**ATTORNEY DOCKET NO. Q62554**

**RELATED PROCEEDINGS APPENDIX**

NONE.